

United States District Court
EASTERN DISTRICT OF TEXAS
SHERMAN DIVISION

WAPP TECH LIMITED PARTNERSHIP,
and WAPP TECH CORP.,
Plaintiffs

V.

BANK OF AMERICA, N.A.,
Defendant

WAPP TECH LIMITED PARTNERSHIP
and WAPP TECH CORP.,
Plaintiffs,

V.

WELLS FARGO BANK, N.A.,
Defendant

CIVIL ACTION NO. 4:21-CV-670
(Judge Mazzant)

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CLAIM CONSTRUCTION MEMORANDUM OPINION AND ORDER

Before the Court is Plaintiffs WAPP Tech Limited Partnership and WAPP Tech Corp. (“Plaintiffs” or “WAPP’s”) Opening Claim Construction Brief (Dkt. #73).¹ Also before the Court is the Responsive Claim Construction Brief (Dkt. #79) filed by Defendants Bank of America N.A. and Wells Fargo Bank, N.A. (collectively, “Defendants”), as well as Plaintiffs’ reply (Dkt. #83) and Defendants’ sur-reply (Dkt. #87). Further before the Court are the parties’ April 7, 2022 P.R. 4-3 Joint Claim Construction Statement (Dkt. #49) and the parties’ June 24, 2022 P.R. 4-5(d) Joint Claim Construction Chart (Dkt. #91).

¹ References to docket numbers are to Civil Action No. 4:21-CV-670 unless otherwise indicated.

The Court held a claim construction hearing on June 30, 2022, to determine the proper construction of the disputed claim terms in United States Patents No. 8,924,192, 9,298,864, 9,971,678, 10,353,811, and 10,691,579.

The Court issues this Claim Construction Memorandum Opinion and Order and hereby incorporates-by-reference the claim construction hearing and transcript as well as the parties’ demonstrative slides presented during the hearing.

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BACKGROUND

Plaintiffs allege infringement of United States Patents No. 8,924,192 (the “’192 Patent”), 9,298,864 (the “’864 Patent”), 9,971,678 (the “’678 Patent”), 10,353,811 (the “’811 Patent”), and 10,691,579 (the “’579 Patent”).

The ’192 Patent, titled “Systems Including Network Simulation for Mobile Application Development and Online Marketplaces for Mobile Application Distribution, Revenue Sharing, Content Distribution, or Combinations Thereof,” issued on December 30, 2014, and bears an earliest priority date of June 10, 2005. The Abstract of the ’192 Patent states:

A system and methods emulate an application executing in real time in a mobile device. The mobile device is emulated in real time using a model running on a processor extrinsic to the mobile device. The model is based on characteristics indicative of performance of the mobile device. The application is executed in real time within the model and the application executing in the model is monitored to determine resource utilization information by the application for the mobile device. The resource utilization information for the mobile device is displayed.

The ’678 Patent is a continuation of the ’192 Patent. The ’192 Patent and the ’678 Patent therefore share a common specification.

The ’864 Patent, titled “System Including Network Simulation for Mobile Application Development,” issued on March 29, 2016, and bears an earliest priority date of June 10, 2005.

The Abstract of the ’864 Patent states:

A system, method and software product emulate and profile an application playing on a mobile device. The mobile device is emulated using a model based upon characteristics related to performance of the mobile device. The application is played and monitored within the model to determine resource utilization of the application for the mobile device.

The ’192 Patent, the ’678 Patent, and the ’811 Patent all resulted from continuation applications based on an application that issued as United States Patent No. 7,813,910 (“the ’910 Patent”).

The '864 Patent resulted from a continuation-in-part of the '910 Patent, and the '579 Patent resulted from a divisional of the '864 Patent. Thus, although the specifications of the '864 Patent and the '579 Patent are not identical to the specifications of the '192 Patent, the '678 Patent, and the '811 Patent, all of the patents-in-suit are related to one another.

The Court previously construed disputed terms in the '192 Patent, the '864 Patent, and the '678 Patent in *WAPP Tech Limited P'ship, et al., v. Seattle Spinco, Inc., et al.*, No. 4:18-CV-469, 4:18-CV-501, 4:18-CV-519 (referred to as the “*Micro Focus*” litigation or as “*WAPP I*”).

LEGAL STANDARDS

Claim construction is a matter of law. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995). The purpose of claim construction is to resolve the meanings and technical scope of claim terms. *U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997). When the parties dispute the scope of a claim term, “it is the court’s duty to resolve it.” *O2 Micro Int’l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1362 (Fed. Cir. 2008).

“It is a ‘bedrock principle’ of patent law that ‘the claims of a patent define the invention to which the patentee is entitled the right to exclude.’” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). The Court examines a patent’s intrinsic evidence to define the patented invention’s scope. *Id.* at 1313–14; *Bell Atl. Network Servs., Inc. v. Covad Commc’ns Group, Inc.*, 262 F.3d 1258, 1267 (Fed. Cir. 2001). Intrinsic evidence includes the claims, the rest of the specification, and the prosecution history. *Phillips*, 415 F.3d at 1312–13; *Bell Atl. Network Servs.*, 262 F.3d at 1267. The Court gives claim terms their ordinary and customary meaning as understood by one of ordinary skill in the art at the time of the invention.

Phillips, 415 F.3d at 1312–13; *Alloc, Inc. v. Int’l Trade Comm’n*, 342 F.3d 1361, 1368 (Fed. Cir. 2003).

Claim language guides the Court’s construction of claim terms. *Phillips*, 415 F.3d at 1314. “[T]he context in which a term is used in the asserted claim can be highly instructive.” *Id.* Other claims, asserted and unasserted, can provide additional instruction because “terms are normally used consistently throughout the patent.” *Id.* Differences among claims, such as additional limitations in dependent claims, can provide further guidance. *Id.*

“[C]laims ‘must be read in view of the specification, of which they are a part.’” *Id.* at 1315 (quoting *Markman*, 52 F.3d at 979). “[T]he specification ‘is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.’” *Id.* (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)); *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1325 (Fed. Cir. 2002). In the specification, a patentee may define his own terms, give a claim term a different meaning than it would otherwise possess, or disclaim or disavow some claim scope. *Phillips*, 415 F.3d at 1316. Although the Court generally presumes terms possess their ordinary meaning, this presumption can be overcome by statements of clear disclaimer. *See SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1343–44 (Fed. Cir. 2001). This presumption does not arise when the patentee acts as his own lexicographer. *See Irdeto Access, Inc. v. EchoStar Satellite Corp.*, 383 F.3d 1295, 1301 (Fed. Cir. 2004).

The specification may also resolve ambiguous claim terms “where the ordinary and accustomed meaning of the words used in the claims lack sufficient clarity to permit the scope of the claim to be ascertained from the words alone.” *Teleflex*, 299 F.3d at 1325. For example, “[a] claim interpretation that excludes a preferred embodiment from the scope of the claim ‘is rarely,

if ever, correct.” *Globetrotter Software, Inc. v. Elan Computer Group Inc.*, 362 F.3d 1367, 1381 (Fed. Cir. 2004) (quoting *Vitronics*, 90 F.3d at 1583). But, “[a]lthough the specification may aid the court in interpreting the meaning of disputed language in the claims, particular embodiments and examples appearing in the specification will not generally be read into the claims.” *Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 1571 (Fed. Cir. 1988); accord *Phillips*, 415 F.3d at 1323.

The prosecution history is another tool to supply the proper context for claim construction because a patentee may define a term during prosecution of the patent. *Home Diagnostics Inc. v. LifeScan, Inc.*, 381 F.3d 1352, 1356 (Fed. Cir. 2004) (“As in the case of the specification, a patent applicant may define a term in prosecuting a patent.”). The well-established doctrine of prosecution disclaimer “preclud[es] patentees from recapturing through claim interpretation specific meanings disclaimed during prosecution.” *Omega Eng’g Inc. v. Raytek Corp.*, 334 F.3d 1314, 1323 (Fed. Cir. 2003). “Indeed, by distinguishing the claimed invention over the prior art, an applicant is indicating what the claims do not cover.” *Spectrum Int’l v. Sterilite Corp.*, 164 F.3d 1372, 1378–79 (Fed. Cir. 1988) (quotation omitted). “As a basic principle of claim interpretation, prosecution disclaimer promotes the public notice function of the intrinsic evidence and protects the public’s reliance on definitive statements made during prosecution.” *Omega Eng’g*, 334 F.3d at 1324. However, the prosecution history must show that the patentee clearly and unambiguously disclaimed or disavowed the proposed interpretation during prosecution to obtain claim allowance. *Middleton Inc. v. 3M Co.*, 311 F.3d 1384, 1388 (Fed. Cir. 2002). Statements will constitute disclaimer of scope only if they are “clear and unmistakable statements of disavowal.” See *Cordis Corp. v. Medtronic AVE, Inc.*, 339 F.3d

1352, 1358 (Fed. Cir. 2003). An “ambiguous disavowal” will not suffice. *Schindler Elevator Corp. v. Otis Elevator Co.*, 593 F.3d 1275, 1285 (Fed. Cir. 2010) (citation omitted).

Although “less significant than the intrinsic record in determining the legally operative meaning of claim language,” the Court may rely on extrinsic evidence to “shed useful light on the relevant art.” *Phillips*, 415 F.3d at 1317 (quotation omitted). Technical dictionaries and treatises may help the Court understand the underlying technology and the manner in which one skilled in the art might use claim terms, but such sources may also provide overly broad definitions or may not be indicative of how terms are used in the patent. *Id.* at 1318. Similarly, expert testimony may aid the Court in determining the particular meaning of a term in the pertinent field, but “conclusory, unsupported assertions by experts as to the definition of a claim term are not useful.” *Id.* Generally, extrinsic evidence is “less reliable than the patent and its prosecution history in determining how to read claim terms.” *Id.*

The Supreme Court of the United States has “read [35 U.S.C.] § 112, ¶ 2 to require that a patent’s claims, viewed in light of the specification and prosecution history, inform those skilled in the art about the scope of the invention with reasonable certainty.” *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2129 (2014). “A determination of claim indefiniteness is a legal conclusion that is drawn from the court’s performance of its duty as the construer of patent claims.” *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1347 (Fed. Cir. 2005) (citations and internal quotation marks omitted), *abrogated on other grounds by Nautilus*, 134 S. Ct. 2120. “Indefiniteness must be proven by clear and convincing evidence.” *Sonix Tech. Co. v. Publ’ns Int’l, Ltd.*, 844 F.3d 1370, 1377 (Fed. Cir. 2017).

ANALYSIS*Agreed Claim Terms*

In their April 7, 2022 P.R. 4-3 Joint Claim Construction and Prehearing Statement (Dkt. #49, at pp. 2–3) and their June 24, 2022 P.R. 4-5(d) Joint Claim Construction Chart (Dkt. #91, Ex. B), the parties submitted the following agreements:

<u>Term</u>	<u>Agreed Construction</u>
“system for testing an application for a mobile device” (‘864 Patent, Claim 1) (‘678 Patent, Claim 45)	The preambles are limiting; plain meaning
“system for developing an application for a mobile device” (‘192 Patent, Claim 1)	The preambles are limiting; plain meaning
“application” (‘192 Patent, Claim 1) (‘864 Patent, Claim 1) (‘678 Patent, Claim 45)	Plain meaning
“simulate” (‘192 Patent, Claim 1) (‘864 Patent, Claim 1) (‘678 Patent, Claim 45) (‘811 Patent, Claims 1, 8, 22, 24) (‘579 Patent, Claims 1, 7, 19)	“emulate”
“simulating” (‘579 Patent, Claim 11)	“emulating”
“emulate” (‘192 Patent, Claim 1) (‘579 Patent, Claims 14, 26)	Plain meaning

“simultaneously visually [simulate/emulate], via one or more profile display windows” ('192 Patent, Claim 1) ('678 Patent, Claim 45)	“emulate simultaneously, and display one or more windows showing resources of the mobile device that are available to the application”
“simulate, via one or more profile display windows” ('864 Patent, Claim 1)	“emulate, and display one or more windows showing resources of the mobile device that are available to the application”
“configured to” ('192 Patent, Claims 1, 2) ('864 Patent, Claim 1) ('678 Patent, Claim 45)	“actually programmed to”
“the software” ('678 Patent, Claim 45)	The antecedent basis for “the software” is “a software testing interface” in Claim 45 of the '678 Patent.

Plaintiffs' Estoppel Argument

Plaintiffs incorporate-by-reference the arguments set forth in their motions for partial summary judgment, in which Plaintiffs argue that Defendants are estopped from asserting indefiniteness as to: (1) the “software authoring interface” terms ('192 Patent, Claims 1 and 2); (2) the “software testing interface” term ('678 Patent, Claim 45); and (3) the “indicative of” terms ('192 Patent, Claim 1; '864 Patent, Claim 1; '678 Patent, Claim 45). (Dkt. #73 at p. 6).

Plaintiffs summarize their argument as follows:

Both Defendants agreed and represented to this Court that they would treat any Final Judgment in Wapp's prior case against Micro Focus (MF) (“the MF suit”), as binding on the validity of the '192, '678, and '864 Patents. Defendants made this promise to obtain stays of Wapp's related infringement claims against them. In other words, Defendants cut the following bargain: they agreed to live with the outcome of the MF Suit on validity in exchange for a stay.

(*Id.* at pp. 6–7). Plaintiffs argue that “[i]t does not matter that Wapp and MF later settled after the Court entered Final Judgment” because “[t]he Final Judgment still exists.” (*Id.* at p. 7). Alternatively and in addition, Plaintiffs assert judicial estoppel. (*Id.* at p. 8).

Defendants respond that the present case involves “wholly distinct infringement claims against new accused products” and “even if issue preclusion were to apply, it would not preclude any indefiniteness arguments raised in this brief because they are being raised for the first time—the specific indefiniteness arguments in this brief were never ‘actually litigated and determined’ in the prior litigation.” (Dkt. #79 at p. 7) (citations omitted).

Because Plaintiffs’ estoppel arguments are the subject of a separate pending motion, the Court does not further address Plaintiffs’ estoppel arguments here.

*Disputed Claim Terms***1. “software authoring interface . . .” and “software testing interface . . .”**

“a software authoring interface configured to simultaneously visually emulate, via one or more profile display windows, a plurality of network characteristics indicative of performance of the mobile device when executing the application . . . further configured to simulate a network connection state encountered by the mobile device”

’192 Patent, Claim 1

Plaintiffs’ Proposed Construction	Defendants’ Proposed Construction
<p>Plain and ordinary meaning. (But any words or phrases with an agreed construction should be given their agreed construction.)</p>	<p>Means-plus-function term.</p> <p>This term is indefinite.</p> <p>Function: “simultaneously visually emulate, via one or more profile display windows, a plurality of network characteristics indicative of performance of the mobile device when executing the application and simulate a network connection state encountered by the mobile device”</p> <p>Structure: This term is indefinite for lack of sufficient corresponding structure in the specification.</p>

<p>“the software authoring interface is configured to enable a user to select from one or more connection simulations for testing how well mobile content performs on the mobile device” ‘192 Patent, Claim 2</p>	
Plaintiffs’ Proposed Construction	Defendants’ Proposed Construction
Plain and ordinary meaning. (But any words or phrases with an agreed construction should be given their agreed construction.)	<p>Means-plus-function term.</p> <p>This term is indefinite.</p> <p>Function: “enable a user to select from one or more connection simulations for testing how well mobile content performs on the mobile device”</p> <p>Structure: This term is indefinite for lack of sufficient corresponding structure in the specification.</p>
<p>“a software testing interface configured to simultaneously visually simulate, via one or more profile display windows, a plurality of operator network characteristics including at least bandwidth availability indicative of performance of the mobile device when executing the application” ‘678 Patent, Claim 45</p>	
Plaintiffs’ Proposed Construction	Defendants’ Proposed Construction
Plain and ordinary meaning. (But any words or phrases with an agreed construction should be given their agreed construction.)	<p>Means-plus-function term.</p> <p>This term is indefinite.</p> <p>Function: “simultaneously visually simulate, via one or more profile display windows, a plurality of operator network characteristics including at least bandwidth availability indicative of performance of the mobile device when executing the application”</p> <p>Structure: This term is indefinite for lack of sufficient corresponding structure in the specification.</p>

(Dkt. #73 at pp. 8–9; Dkt. #79 at pp. 7–8; *see* Dkt. #49, Ex. A at pp. 1, 3 & 5; *see also id.*, Ex. B at pp. 1–3; Dkt. #91, Ex. A at pp. 1–3).

a. The Parties’ Positions

Plaintiffs argue that Defendants cannot rebut the presumption against means-plus-function treatment for these non-means terms because the word “interface” connotes structure and because software authoring and software testing have been well known. (Dkt. #73 at pp. 9–14). Plaintiffs also argue that “[t]he specification further confirms that the claimed ‘software authoring interface’ and ‘software testing interface’ are user interface structures.” (*Id.* at p. 14). Alternatively, Plaintiffs argue that “[e]ven if the Court finds that any of these terms are means-plus-function terms, the Court should not conclude they are indefinite” because “the specification describes corresponding structure.” (*Id.* at p. 17) (citation omitted).

Defendants respond that “‘interface’ alone and in the context of the full claim phrases does not connote structure, but is instead a generic, black-box nonce word.” (Dkt. #79 at p. 1; *see id.* at p. 9). Defendants also submit that the phrases “software authoring interface” and “software testing interface” appear only in the claims, and neither the specification nor the prosecution history demonstrates any structural meaning for these terms. (*Id.* at pp. 10–11). Further, Defendants argue that Plaintiffs’ reliance on the phrase “user interface” being a well-known term is unavailing because the claims do not recite “user interface” and because Plaintiffs do not justify interpreting the disputed terms as referring to a user interface. (*Id.* at pp. 12–13). Defendants conclude that “[t]he varied examples in the specification support that ‘interface’ itself connotes no structure, but instead is a generic, black-box nonce word that can be used in combination with other words to refer to myriad concepts.” (*Id.* at p. 13).

Plaintiffs reply that whereas Defendants argue that “interface” is a broad term, breadth is not indefiniteness. (Dkt. #83 at p. 3). Plaintiffs also argue that a claim term need not appear verbatim in the specification. (*Id.* at p. 5). Further, Plaintiffs argue:

Although the two “interface” terms refer to a user interface, Wapp is not arguing these terms have exactly the same meaning. The plain language imposes different requirements. For example, the “software authoring interface” of ’192 claim 1 must be configured to “simulate a network connection state encountered by the mobile device,” whereas the “software testing interface” of ’678 claim 45 must be configured to “visually simulate . . . at least bandwidth availability.” Because these terms do not have the same scope, claim differentiation is inapplicable.

(*Id.* at p. 6).

In sur-reply, Defendants argue that “[n]one of Wapp’s [cited] cases held the word ‘interface’ *itself* connotes structure.” (Dkt. #87 at p. 2). Defendants reiterate that “the word ‘interface’ does not provide any indication of structure and sets forth a black box recitation of structure just like the term ‘means.’” (*Id.* at p. 3) (citations omitted). Defendants also emphasize that “the inventors *did* use the term ‘user interface’ in the specification but *not* in the claims.” (*Id.* at p. 5).

At the June 30, 2022 hearing, Plaintiffs emphasized the declaration of its expert, Dr. Sam Malek, as a source of information regarding the structural meaning of “interface” in this context. Plaintiffs also noted that Defendants must overcome not only the presumption against means-plus-function treatment but also the presumption of validity. Defendants responded that Dr. Malek’s declaration does not prove that these disputed terms have any structural meaning. Defendants also argued that they have presented ample evidence to overcome the two presumptions cited by Plaintiffs.

b. Analysis

Title 35 U.S.C. § 112(f) (formerly § 112, ¶ 6) provides: “An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.” “In exchange for using this form of claiming, the patent specification must disclose with sufficient particularity the corresponding structure for performing the claimed function and clearly link that structure to the function.” *Triton Tech of Tex., LLC v. Nintendo of Am., Inc.*, 753 F.3d 1375, 1378 (Fed. Cir. 2014).

“[T]he failure to use the word ‘means’ . . . creates a rebuttable presumption . . . that § 112, para. 6 does not apply.” *Williamson v. Citrix Online LLC*, 792 F.3d 1339, 1348 (Fed. Cir. 2015) (citations and internal quotation marks omitted). “When a claim term lacks the word ‘means,’ the presumption can be overcome and § 112, para. 6 will apply if the challenger demonstrates that the claim term fails to recite sufficiently definite structure or else recites function without reciting sufficient structure for performing that function.” *Id.* at 1349 (citations and internal quotation marks omitted).

Williamson, in an *en banc* portion of the decision, abrogated prior statements that the absence of the word “means” gives rise to a “strong” presumption against means-plus-function treatment. *Id.* (citation omitted). *Williamson* also abrogated prior statements that this presumption “is not readily overcome” and that this presumption cannot be overcome “without a showing that the limitation essentially is devoid of anything that can be construed as structure.” *Id.* (citations omitted). Instead, *Williamson* found, “[h]enceforth, we will apply the presumption as we have done prior to *Lighting World*” *Id.* (citing *Lighting World, Inc. v. Birchwood*

Lighting, Inc., 382 F.3d 1354, 1358 (Fed. Cir. 2004)). In a subsequent part of the decision not considered *en banc*, *Williamson* affirmed the district court’s finding that the term “distributed learning control module” was a means-plus-function term that was indefinite because of lack of corresponding structure, and in doing so *Williamson* stated that “‘module’ is a well-known nonce word.” 792 F.3d at 1350.

Here, Claim 1 of the ’192 Patent, for example, recites (emphasis added):

1. A system for developing an application for a mobile device comprising:
 - a *software authoring interface* configured to simultaneously visually emulate, via one or more profile display windows, a plurality of network characteristics indicative of performance of the mobile device when executing the application;
 - wherein the *software authoring interface* is further configured to simulate a network connection state encountered by the mobile device.

The “software authoring interface . . .” and “software testing interface . . .” terms do not use any of the words identified by *Williamson* as “nonce” words lacking structure. *See id.* Although the term “interface” may refer to a broad class of structures, the claim tethers these terms to the particular context of software authoring. *See Personalized Media Commc’ns, LLC v. Int’l Trade Comm’n*, 161 F.3d 696, 705 (Fed. Cir. 1998) (“Even though the term ‘detector’ does not specifically evoke a particular structure, it does convey to one knowledgeable in the art a variety of structures known as ‘detectors.’); *see also Team Worldwide Corp. v. Intex Recreation Corp.*, No. 2020-1975, 2021 WL 4130634, at *5 (Fed. Cir. Sept. 9, 2021) (“A ‘critical question’ in this inquiry ‘is whether the claim term is used in common parlance or by skilled artisans to designate structure, including either a particular structure or a class of structures.’”) (quoting *MTD Prods. Inc. v. Iancu*, 933 F.3d 1336, 1341 (Fed. Cir. 2019)); *see generally Dyfan, LLC v. Target Corp.*, 28 F.4th 1360 (Fed. Cir. 2022); *cf. Skky, Inc. v. MindGeek, s.a.r.l.*, 859 F.3d 1014, 1019 (Fed. Cir. 2017) (finding “wireless device means” not a

means-plus-function term, noting that “it is sufficient if the claim term is used in common parlance or by persons of skill in the pertinent art to designate structure, even if the term covers a broad class of structures and even if the term identifies the structures by their function”) (quoting *TecSec, Inc. v. Int’l Bus. Machs. Corp.*, 731 F.3d 1336, 1347 (Fed. Cir. 2013)).

Also of note, Plaintiffs cite a case in which the Court of Appeals for the Federal Circuit found that the word “interface” connoted structure in a software context as to “user interface.” *Zeroclick, LLC v. Apple Inc.*, 891 F.3d 1003, 1008 (Fed. Cir. 2018) (“program” and “user interface code” are “used not as generic terms or black box recitations of structure or abstractions, but rather as specific references to conventional graphical user interface programs or code”). Defendants argue that *Zeroclick* is distinguishable because the court relied on specific teachings in the specification (*see* Dkt. #87 at p. 2), but in the present case the specification does indeed provide significant context. For example, the specification uses the term “interface” when referring to a “user interface” (’192 Patent at 4:15), “interface (not shown) that provides communication . . . via one or more of USB, Ethernet, infrared, Bluetooth, Wifi and other similar communication media” (*id.* at 6:65–7:1), “operator interface” (*id.* at 10:40–42), and “network simulator interface” (*id.* at 11:5–7). The word “interface” is thus used broadly but in the context of computers and communication networks.

These disclosures support finding that the word “interface” connotes structure in the context of the “software authoring interface” and “software testing interface” terms that are here at issue. The breadth of the word “interface,” at least in the context of the patents-in-suit, does not demonstrate any lack of structure or otherwise give rise to any indefiniteness. *See BASF Corp. v. Johnson Matthey Inc.*, 875 F.3d 1360, 1367 (Fed. Cir. 2017) (“breadth is not indefiniteness”) (quoting *SmithKline Beecham Corp. v. Apotex Corp.*, 403 F.3d 1331, 1341 (Fed.

Cir. 2005)); *see also* *Niazi Licensing Corp. v. St. Jude Med. S.C., Inc.*, 30 F.4th 1339, 1347 (Fed. Cir. 2022) (“a claim is not indefinite just because it is broad”) (citing *BASF*, 875 F.3d at 1367). The opinions of Defendants’ expert regarding broad and varying definitions for “interface” are unpersuasive. (*See* Dkt. #73, Ex. 8, Apr. 21, 2022 Chatterjee Decl. at ¶¶ 62–63).

Defendants argue that “user interface” is a different term that cannot be equated with “software authoring interface” or “software testing interface.” *See, e.g., Chicago Bd. Options Exch., Inc. v. Int’l Sec. Exch., LLC*, 677 F.3d 1361, 1369 (Fed. Cir. 2012) (noting “general presumption that different terms have different meanings”).

Despite Defendants’ arguments, “software authoring” and “software testing” are not mere functional descriptions, and the absence of the phrase “user interface” tends to support, rather than refute, that the “software authoring interface . . .” and “software testing interface . . .” terms refer to known types of user interfaces. *See id.* That is, these phrases refer to types of user interfaces that would be recognized by a person of ordinary skill in the art, wherein “user” does not necessarily refer to an end user but rather may refer to a software engineer who is developing an application. *See, e.g.,* ’192 Patent at 1:52–2:8 (Background section discussing problem that “testing process is time-consuming and therefore costly for the application author”); *id.* at 10:34–38 (“FIGS. 9, 10, 11 and 12 show exemplary windows that allow a user to interact with emulator 101 for configuring and testing operation of application 104 within model 102 when simulating connection to a wireless network.”).

The claim language that follows the word “interface” further reinforces that the disputed terms refer to particular types of user interfaces because that claim language recites that the interface “visually emulate[s]” or “visually simulate[s]” network characteristics “via one or more profile display windows.” *See* ’192 Patent, Cl. 1; *see also* ’678 Patent, Cl. 45. The parties agree

that “simultaneously visually [simulate/emulate], via one or more profile display windows” means to “emulate simultaneously, and display one or more windows showing resources of the mobile device that are available to the application.” (Dkt. #48 at p. 2). The claim language that accompanies these “interface” terms thus reinforces that the presumption against means-plus-function treatment has not been rebutted. *See Dyfan*, 28 F.4th at 1368 (term was “coupled with a description of the [term’s] operations”).

The specification reinforces this interpretation of the “interface” terms as connoting structure, disclosing for example:

Application authors (e.g., users of emulator 101) are provided with a visual authoring environment in which the authored application may be emulated as operating within one or more modeled mobile devices (that are optionally connected to a simulated wireless network) without leaving the authoring environment.

’192 Patent at 13:46–52; *see id.* at 2:21–22, 5:21–25 & 8:24–62. These disclosures confirm the structural connotations of the “software authoring interface . . .” and “software testing interface . . .” terms even though those exact phrases do not appear in the specification. *Cf. Novartis Pharm. Corp. v. Accord Healthcare, Inc.*, 21 F.4th 1362, 1373 (Fed. Cir. 2022) (rejecting argument that “ignore[d] a central tenet of our written description jurisprudence—that the disclosure must be read from the perspective of a person of skill in the art—as well as precedent stating that the disclosure need not describe a limitation *in haec verba*”).

The opinions of Plaintiffs’ expert in this regard are further persuasive. (Dkt. #73, Ex. 7, Apr. 21, 2022 Malek Decl. at ¶¶ 31–32, 35, 48, 53–54 & 57). The contrary opinions of Defendants’ expert are unpersuasive. (*See, e.g.*, Dkt. #73, Ex. 8, Apr. 21, 2022 Chatterjee Decl. at ¶ 28 (“there are many different types of interfaces,” such as an “Application Programming Interface” and a “user interface”), ¶ 30 (“widely varying references to ‘interface’ confirm that

‘interface’ is a generic term that does not connote any specific structure or class of structures, but is instead used as mere verbiage connected to a wide variety of possible functions”) & ¶¶ 78–84.)

Thus, to whatever extent the word “interface” might be deemed to lack sufficient structural connotations, “the presence of modifiers” imparts structural meaning to the disputed terms. *Williamson*, 792 F.3d at 1351.

The Court therefore finds that the “software authoring interface . . .” and “software testing interface . . .” terms connote structure. The Court need not reach Plaintiffs’ argument that Defendants’ invalidity contentions amount to a concession that a “software authoring interface” or a “software testing interface” is a type of “user interface.” (*See* Dkt. #73 at pp. 10–11) (citing Ex. 9 at pp. 3–4, 16; citing Ex. 10 at pp. 3–5; citing Ex. 11 at pp. 3–5, 17; citing Ex. 12 at pp. 3–4; citing Ex. 13 at pp. 7–8; citing Ex. 14 at pp. 7–8; citing Ex. 15 at pp. 7–8; citing Ex. 16 at pp. 7–8). The Court similarly need not reach Plaintiffs’ argument that Defendants’ claim construction briefing in prior litigation conceded that these disputed terms are not indefinite. (*See* Dkt. #73 at p. 11).

The Court thus hereby expressly rejects Defendants’ argument that the “software authoring interface . . .” and “software testing interface . . .” terms are means-plus-function terms. Defendants present no alternative proposed construction, so no further construction is necessary.

The Court accordingly hereby construes **“a software authoring interface configured to simultaneously visually emulate, via one or more profile display windows, a plurality of network characteristics indicative of performance of the mobile device when executing the application . . . further configured to simulate a network connection state encountered by the mobile device,” “the software authoring interface is configured to enable a user to**

select from one or more connection simulations for testing how well mobile content performs on the mobile device,” and “a software testing interface configured to simultaneously visually simulate, via one or more profile display windows, a plurality of operator network characteristics including at least bandwidth availability indicative of performance of the mobile device when executing the application” to have their plain meaning.

2. “network characteristics”

<p style="text-align: center;">“network characteristics” ’192 Patent, Claim 1 ’864 Patent, Claim 1 ’678 Patent, Claim 45 ’579 Patent, Claims 25, 26</p>	
Plaintiffs’ Proposed Construction	Defendants’ Proposed Construction
<p>Plain and ordinary meaning.</p> <p>Alternatively: “characteristics of the network, regardless of whether they are identified directly (e.g., such as by selecting bandwidth) or identified as events (e.g., such as by selecting network activity that determines characteristics of a network from the perspective of a server or client (e.g., a mobile phone))”²</p>	<p>“characteristics of the network, regardless of whether they are identified directly or identified as events”</p>

(Dkt. #49, Ex. A at p. 6; *id.*, Ex. B at p. 4; Dkt. #79 at p. 17; Dkt. #91, Ex. A at p. 3).

² This alternative proposal is not set forth in the parties’ Joint Claim Construction Chart (Dkt. #91, Ex. A at p. 3) but is set forth in Plaintiffs’ opening claim construction brief as follows: “If the Court is inclined to adopt a construction based on Dr. Malek’s prior validity report, any such construction should at least include the clarifying parenthetical statements ‘(e.g., such as by selecting bandwidth)’ and ‘(e.g., such as by selecting network activity that determines characteristics of a network from the perspective of a server or client (e.g., a mobile phone))’ that Defendants have omitted from their proposed construction.” (Dkt. #73 at p. 20).

a. The Parties' Positions

Plaintiffs argue that whereas “network characteristics” is a “readily understood term that should be given its ordinary meaning,” “Defendants’ proposed construction, on the other hand, is based on a selectively cropped and tortured reading of an extrinsic document from the prior litigation and renders this term unnecessarily vague and ambiguous.” (Dkt. #73 at p. 17). Plaintiffs also argue that the specification disclosures cited by Defendants do not support Defendants’ proposal of “identified directly or identified as events” and, moreover, “[a]bsent disclaimer or disavowal, limitations from exemplary embodiments such as Figure 12 must not be imported into the claims.” (*Id.* at p. 20) (citation omitted).

Defendants respond that “in the context of the ’192, ’864, and ’678 patents, network characteristics are specifically described in Figure 12 of the patents,” and the patents-in-suit use the term “network characteristics” to “include not only directly identified characteristics but also characteristics identified as events, such as the events stated in the specification.” (Dkt. #79 at p. 17–19). Defendants argue that, by proposing “plain meaning,” Plaintiffs are attempting to “reserve[] [their] ability to narrow [their] construction of ‘network characteristics’ for purposes of anticipation and obviousness, despite using a broad construction in the context of written description.” (*Id.* at p. 19).

Plaintiffs reply that “[b]y cherry-picking the words from Dr. Malek’s prior validity report that they like and removing the words they do not like (*i.e.*, the parentheticals that describe Figure 12), Defendants arrive at a nonsensical and unsupported construction.” (Dkt. #83 at p. 7).

In sur-reply, Defendants argue that “the intrinsic record, not Dr. Malek’s report, most informs the scope of the claimed ‘network characteristics[,]’” “[a]nd the specification does not define ‘network characteristics’ using the examples identified in Dr. Malek’s report.” (Dkt. #87

at p. 6). Defendants also submit that “Defendants do not believe there is a substantive difference and would agree with the use of either ‘identified’ or ‘selected.’” (*Id.* at p. 7).

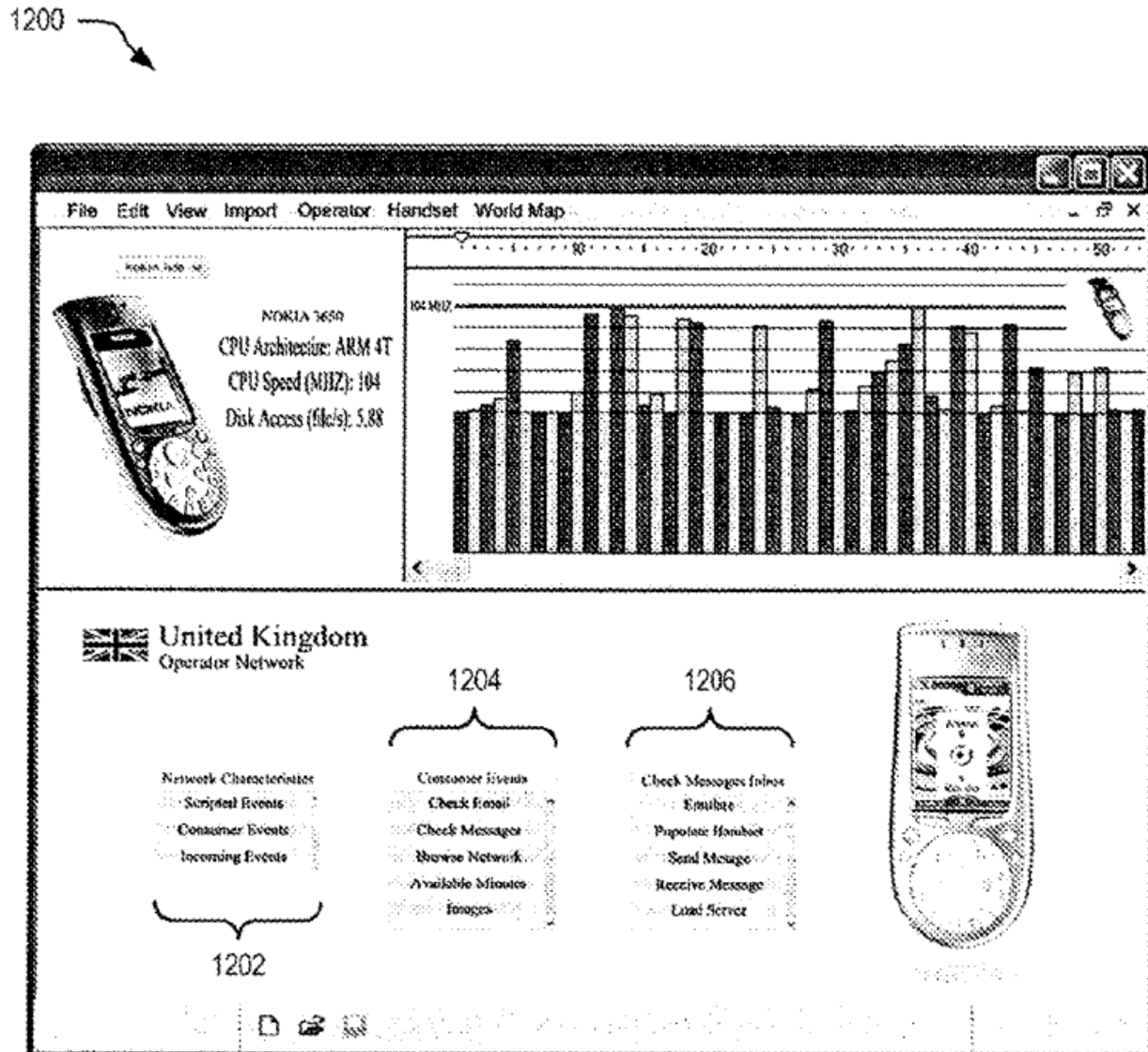
At the June 30, 2022 hearing, Plaintiffs argued that the prior statements of Plaintiffs’ expert, Dr. Malek, cited here by Defendants, stated that Figure 12 of the patent is not inconsistent with the plain meaning of “network characteristics.” Plaintiffs argued that Dr. Malek did not limit the meaning of “network characteristics” to what is shown in Figure 12. Defendants responded that Plaintiffs’ proposal of plain and ordinary meaning would be improper because the plain meaning of “network characteristics” does not include “events.” Defendants also argued that Plaintiffs’ alternative proposed construction, which would include parentheticals with specific examples, would improperly emphasize the listed examples. Plaintiffs replied that they are not attempting to exclude Figure 12 from the scope of “network characteristics.”

b. Analysis

Claim 1 of the ’192 Patent, for example, recites (emphasis added):

1. A system for developing an application for a mobile device comprising:
 - a software authoring interface configured to simultaneously visually emulate, via one or more profile display windows, a plurality of *network characteristics* indicative of performance of the mobile device when executing the application;
 - wherein the software authoring interface is further configured to simulate a network connection state encountered by the mobile device.

The specification discloses examples of “network characteristics” with reference to Figure 12. Figure 12 is reproduced here:

**FIG. 12**

Although the relevant text contained in Figure 12 (identified by reference numerals 1202, 1204, and 1206) is barely legible, the specification describes Figure 12 as follows:

Upon selection of a mobile device from list 1104, window 1200, FIG. 12, is displayed to allow the user to select desired network characteristics for simulation.

Window 1200 shows a pull-down list 1202 of network characteristics that may be simulated by simulator 810. For example, simulator 810 may allow control of scripted events (e.g., cell tower identification, service message, bandwidth, etc.),

consumer events (e.g., checking email, checking messages, browsing network, available minutes, selecting images, etc.) and incoming events (e.g., phone calls, WAP Messages, receiving MMS, receiving SMS, etc.). Based upon selection from list 1202, a second list may be presented to allow further simulation requirements to be entered. In the example of window 1200, consumer events entry of list 1202 was selected, resulting in display of pull-down list 1204 from which check messages was selected resulting in the display of pull-down list 1206. In this example, the user may select ‘send message’ from list 1206 to evaluate the performance of application 104 while a message is received from the network.

’192 Patent at 11:67–12:20.

Both parties’ experts agree that the plain and ordinary meaning of “network characteristics” includes “uplink data rate, downlink data rate, delay, latency, packet loss, congestion, packet jitter, and throughput.” (Dkt. #79, Ex. 8, Apr. 21, 2022 Chatterjee Decl. at ¶ 141; *see id.*, Ex. 31, Dec. 22, 2020 Malek Validity Report at ¶ 243).

To support their proposal that “network characteristics” should be construed to mean “characteristics of the network, regardless of whether they are identified directly or identified as events,” Defendants cite an opinion by Plaintiffs’ expert, Dr. Sam Malek, in the prior *Micro Focus* litigation, Civil Actions No. 4:18-CV-469, -501, -519. Specifically, Dr. Malek opined in that case as follows:

It is my opinion that the disclosure of Figure 12 of the patents-in-suit is not inconsistent with the plain meaning of the term network characteristics to a person of ordinary skill in the art, which would include (but not be limited to) characteristics of a network, such as uplink data rate, downlink data rate, delay, latency, packet loss, congestion, packet jitter, throughput and so on. Figure 12 describes one exemplary embodiment “to allow the user to select desired network characteristics for simulation.” ’678 patent, col. 12:22–25; ’192 patent, col. 11:67–12:2; ’864 patent, col. 11:47–50. Window 1200 shown in Figure 12 allows a user to select bandwidth as well as other events that can determine the characteristics of the network from the perspective of the mobile phone. ’678 patent, Figure 12 and cols. 11:49–59, 12:36–33 [*sic*]; ’192 patent, Figure 12 and cols. 11:28–38, 12:3–10; ’864 patent, Figure 12 and cols. 11:7–17, 11:51–58; this report at ¶¶ 53–56, 241–2 above. As such, it is my opinion that a person of ordinary skill would understand network characteristics to refer to characteristics of the network, regardless of whether they are *identified directly* (e.g., such as by

selecting bandwidth), or *identified as events* (e.g., such as by selecting network activity that determines characteristics of a network from the perspective of a server or client (e.g., a mobile phone)).

(Dkt. #73, Ex. 31, Dec. 22, 2020 Malek Validity Report at ¶ 243) (MFSUB0016445) (emphasis added).

Defendants argue that this opinion expressed by Plaintiffs' expert is consistent with disclosure in the specification. In particular, Defendants argue that "[i]n Figure 12, rather than directly selecting network characteristics such as data rate or latency, a user selects events such as 'check email' and 'check messages.'" (Dkt. #79 at p. 18).

Plaintiffs submit the opinion of Dr. Malek in the present case that: "To the extent Defendants contend that their construction is supported by my previous validity expert report dated December 22, 2020, I disagree. That expert report constitutes extrinsic evidence. Moreover, Defendants' reliance is misplaced because it takes an incomplete excerpt from my previous expert report out of context." (Dkt. #74, Ex. 7, Apr. 21, 2022 Malek Decl. at ¶ 71).

Dr. Malek further opines:

Defendants' proposed construction selectively eliminates portions of the paragraph above [¶ 243 of Dr. Malek's December 22, 2020 report] rendering it unnecessarily confusing. Moreover, the paragraph above was not intended to define the term "network characteristics." Instead, this sentence was merely part of a response to Dr. van der Weide's opinions regarding an alleged lack of written description. In particular, Dr. van der Weide, who was Micro Focus' expert, wrongly opined that the term "network characteristics" excluded bandwidth.

(*Id.*) (citations omitted).

Plaintiffs also argue that Defendants' reliance on the above-reproduced opinion of Dr. Malek in prior litigation is confusing because "the claims themselves never talk about 'identifying' anything." (Dkt. #73 at p. 18). Plaintiffs argue:

Without the parentheticals [(set forth in Dr. Malek's opinion)], the phrase [proposed by Defendants] becomes unintelligible to a jury. What does it mean for

network characteristics to be “identified directly” in the context of the claim?
Who or what is doing the identification? “Directly” with respect to what?

(*Id.*).

Plaintiffs propose that “[i]f the Court is inclined to adopt a construction based on Dr. Malek’s prior validity report, any such construction should at least include the clarifying parenthetical statements ‘(e.g., such as by selecting bandwidth)’ and ‘(e.g., such as by selecting network activity that determines characteristics of a network from the perspective of a server or client (e.g., a mobile phone))’ that Defendants have omitted from their proposed construction.” (Dkt. #73 at p. 20).

Defendants respond that adding a parenthetical specifically referring to “bandwidth,” for example, would be inappropriate because Plaintiffs’ own expert, Dr. Malek, has identified several other examples such as “uplink data rate, downlink data rate, delay, latency, packet loss, congestion, packet jitter, throughput, and so on.” (Dkt. #79, Ex. 31, Dec. 22, 2020 Malek Validity Report at ¶ 243) (MFSUB0016445). Defendants similarly argue that Plaintiffs’ proposal of referring to a “mobile phone” “is needlessly limiting and prejudicial in view of Wapp’s infringement allegations against Defendants’ mobile applications running on mobile phones.” (Dkt. #79 at p. 21).

On balance, surrounding claim language provides sufficient context for applying the plain meaning of “network characteristics.” For example, in the ’192 Patent, the ’864 Patent, and the ’678 Patent, the network characteristics are “indicative of performance of the mobile device when executing the application” (’192 Patent, Cl. 1; ’864 Patent, Cl. 1) or are recited as “including at least bandwidth availability indicative of performance of the mobile device when executing the application” (’678 Patent, Cl. 45). As for Claims 25 and 26 of the ’579 Patent, these depend from Claim 18, which recites that “the characteristics include bandwidth

information.” The broad plain meaning of “network characteristics” is thus apparent from how the term is use in the claims. Especially given this context, the above-discussed prior statements by Plaintiffs’ expert do not compel referring to characteristics being “identified directly” or being “identified as events.” Defendants’ proposed construction would tend to confuse rather than clarify the scope of the claims and is rejected.

Rather, the context provided by surrounding claim language demonstrates that the term “network characteristics” encompasses what Plaintiffs’ expert has referred to as “events”—or, more precisely, characteristics *associated with* events—such that the term “network characteristics” is not limited to characteristics that are “identified directly.” (*See* Dkt. #79, Ex. 31, Dec. 22, 2020 Malek Validity Report at ¶ 243) (MFSUB0016445) (reproduced above); *see also* ’192 Patent at 11:67–12:20 (reproduced above).

The Court therefore hereby expressly rejects Defendants’ proposed construction, and no further construction is necessary. *See O2 Micro*, 521 F.3d at 1362 (“[D]istrict courts are not (and should not be) required to construe every limitation present in a patent’s asserted claims.”); *see also Finjan, Inc. v. Secure Computing Corp.*, 626 F.3d 1197, 1207 (Fed. Cir. 2010) (“Unlike *O2 Micro*, where the court failed to resolve the parties’ quarrel, the district court rejected Defendants’ construction.”); *Bayer Healthcare LLC v. Baxalta Inc.*, 989 F.3d 964, 977–79 (Fed. Cir. 2021).

The Court accordingly hereby construes “**network characteristics**” to have its **plain meaning**.

3. “indicative of”

<p style="text-align: center;">“indicative of” ’192 Patent, Claim 1 ’864 Patent, Claim 1 ’678 Patent, Claim 45 ’811 Patent, Claims 1, 4, 9, 22, 24 ’579 Patent, Claim 7</p>	
Plaintiffs’ Proposed Construction	Defendants’ Proposed Construction
Plain and ordinary meaning.	Indefinite

(Dkt. #49, Ex. A at p. 7; *id.*, Ex. B at p. 5; Dkt. #79 at p. 22; Dkt. #91, Ex. A at p. 4).

a. The Parties’ Positions

Plaintiffs argue that “[t]he phrase ‘indicative of’ has a well understood English meaning, and courts routinely recognize this,” and “[t]he specification is consistent with the ordinary English meaning of ‘indicative of’” because “[t]he specification repeatedly uses words like ‘indicate’ in their ordinary way.” (Dkt. #73 at p. 21) (citations omitted). As to the opinion of Defendants’ expert that “‘indicative of’ has different meanings that vary in a wide variety of contexts,” Plaintiffs argue that “[t]he fact that a word or phrase is used in a ‘variety of contexts’ does not make it unclear or indefinite.” (*Id.* at p. 22). Finally, Plaintiffs argue that the absence of the exact phrase “indicative of” in the specification does not give rise to indefiniteness. (*Id.* at p. 23).

Defendants respond that “[t]he ‘indicative of’ terms are indefinite because a POSITA would not know with reasonable certainty how characteristics *indicative of* a mobile device / a network / performance differ, if at all, from characteristics *of* a mobile device / a network / performance based on the intrinsic and extrinsic evidence.” (Dkt. #79 at p. 22). Defendants also argue that whereas dependent Claim 4 of the ’811 Patent implies that Claim 1 encompasses other

characteristics that are not recited in dependent Claim 4, “such claim language provides no guidance as to what those other characteristics may be.” (*Id.* at pp. 23–24). Defendants argue that “[t]he specification lacks any guideposts for determining what characteristics are or are not ‘indicative of’ various aspects of a mobile device in the context of the claims.” (*Id.* at p. 24). Defendants also cite the prosecution history of the ’579 Patent, during which the patentee responded to an indefiniteness rejection by replacing “indicative of” with simply “of.” (*Id.* at p. 25; *see id.* at pp. 25–26). Finally, Defendants argue that the extrinsic evidence cited by Plaintiffs merely reinforces that “indicative of” has varying definitions in various different contexts, and “[t]hese varying definitions in no way define or clarify which characteristics are or are not ‘indicative of’ a mobile device, network, or performance.” (*Id.* at p. 27).

Plaintiffs reply that “[a]gain, Defendants conflate breadth with indefiniteness,” and “[t]he fact that the specification does not explicitly define ‘indicative of’ further suggests that the patentee intended this term to have its ordinary English meaning.” (Dkt. #83 at p. 8). Plaintiffs urge that “[t]he use of a common English phrase combined with illustrative examples is more than sufficient to inform a POSITA of the term’s meaning.” (*Id.* at p. 9).

In sur-reply, Defendants argue: “That a word has a dictionary meaning in general, casual usage is irrelevant to whether the word is indefinite in the context of a patent.” (Dkt. #87 at p. 7). Defendants also submit that “Wapp cannot even explain how characteristics ‘*indicative of*’ a mobile device/network/performance differ from characteristics ‘*of*’ the same subjects, even after being challenged to do so.” (*Id.* at p. 8) (citing Dkt. #79 at pp. 23–24).

At the June 30, 2022 hearing, Defendants acknowledged that the specification need not disclosed every conceivable example of “indicative of,” but Defendants argued that the specification fails to provide any meaningful guidance at all. Defendants also emphasized the

prosecution history, arguing that after the examiner rejected a limitation in which “indicative of” appeared during prosecution of the ’579 Patent, the patentee’s only substantive change was to remove the word “indicative.” Plaintiffs responded that nothing in this prosecution history identifies “indicative of” as the reason for the examiner’s rejection. Plaintiffs also pointed out that the patentee made another change besides removing the word “indicative.” Specifically, this amendment also changed an instance of “the” to “a,” thereby removing any possible concern about antecedent basis for “the selected mobile device type.”

b. Analysis

The claims here at issue refer to “characteristics indicative of a mobile device” (’811 Patent, Claims 1, 22; ’811 Patent, Claim 9 (similar)), “characteristics indicative of a network” (’811 Patent, Claim 1; *see* ’811 Patent, Claim 24 (similar); *see also* ’579 Patent, Claim 7 (similar)), and “network characteristics indicative of performance of [a] mobile device when executing [an] application” (’192 Patent, Claim 1; ’864 Patent, Claim 1; *see* ’678 Patent, Claim 45 (similar)).

Claim 1 of the ’192 Patent, for example, recites (emphasis added):

1. A system for developing an application for a mobile device comprising:
 - a software authoring interface configured to simultaneously visually emulate, via one or more profile display windows, a plurality of network characteristics *indicative of* performance of the mobile device when executing the application;
 - wherein the software authoring interface is further configured to simulate a network connection state encountered by the mobile device.

As further examples, Claims 1–7 of the ’881 Patent recite (emphasis added):

1. A non-transitory, computer-readable medium comprising software instructions for developing an application to be run on a mobile device, wherein the software instructions, when executed, cause a computer to:
 - display a list of a plurality of mobile device models from which a user can select, wherein each model includes one or more characteristics *indicative of* a corresponding mobile device;

simulate at least one of the one or more characteristics *indicative of* the mobile device corresponding to the selected mobile device model;

simulate one or more characteristics *indicative of* a network on which the mobile device corresponding to the selected mobile device model can operate;

monitor utilization of a plurality of resources over time as the application is running;

display simultaneously two or more graphical images of the application's resource utilization, wherein each graphical image relates to a different resource;

correspond the utilization of a specific displayed resource at a given time with one or more functions of the application responsible for that utilization.

2. The medium of claim 1, wherein the instructions initiate transmission of the application that is being developed to one or more physical versions of a mobile device corresponding to the selected mobile device model.

3. The medium of claim 2, wherein the instructions initiate downloading of at least one of the one or more simulated characteristics from a remote server.

4. The medium of claim 2, wherein the one or more characteristics *indicative of* the mobile device corresponding to the selected mobile device model include at least one of processor type, processor speed, storage access speed, RAM size, storage size, display width, display height, pixel depth, processor availability, RAM availability or storage availability.

5. The medium of claim 4, wherein the monitored resources include processor usage, RAM usage and network usage.

6. The medium of claim 5, wherein the one or more characteristics *indicative of* a network are derived at least in part from information captured from one or more wireless networks.

7. The medium of claim 5, wherein the one or more characteristics *indicative of* a network are based on a geographical region.

The specification uses the term “indicates,” such as follows:

[D]isplay 300 is shown with a time line 302 that represents timeline 222 of application 104. In this example, each bar 304 *indicates* processor resource utilization for each of certain frames 223 of application 104. . . . A capacity line 308 (capout) *indicates* the maximum processor resource available to application 128.

'192 Patent at 8:41–50 (emphasis added). The specification also provides examples of “Mobile Device Characteristics” as follows: “Name,” “Processor,” “Processor Speed,” “Storage Access

Speed,” “RAM Size,” “Storage Size,” “Display Width,” “Display Height,” “Pixel Depth,” “Processor Availability,” “RAM Availability,” and “Storage Availability.” *Id.* at 5:55–6:8 (Table 1).

On balance, the context in which “indicative of” (and the similar term “indicates”) is used in the claims and the specification demonstrates that the term has its ordinary meaning as used in common parlance. The opinion of Plaintiffs’ expert is persuasive in this regard. (*See* Dkt. #73, Ex. 7, Apr. 21, 2022 Malek Decl. at ¶ 74 (citing dictionary that defines “indicative” as meaning “serving to indicate” and that defines “indicate” as meaning “to point out or point to” or “to be a sign, symptom, or index of”); *see also id.* at ¶¶ 75–76). The absence of the exact phrase “indicative of” in the specification does not compel finding any lack of reasonable clarity.

Defendants argue: “Defendants do not challenge the meanings of ‘indicative of’ in English linguistics or in the abstract—the issue here is Wapp’s use of the phrase *in the claims* to intentionally introduce ambiguity to the asserted claims.” (Dkt. #79 at p. 26). Defendants also argue that “[t]he[] varying definitions [cited by Plaintiffs] in no way define or clarify which characteristics are or are not ‘indicative of’ a mobile device, network, or performance.” (Dkt. #79 at p. 27; *see, e.g.*, Dkt. #73, Ex. 8, Apr. 21, 2022 Chatterjee Decl. at ¶ 135 (Dr. Chatterjee describing context for the various uses of “indicative of” in articles authored by Dr. Chatterjee and cited by Plaintiffs)).

The context provided by the claims and the specification, however, is reasonably clear that the patentee’s use of “indicative of” is appropriate and understandable in the context of, for example, “emulate an application executing in real time in a mobile device,” wherein “[t]he mobile device is emulated in real time using a model running on a processor extrinsic to the mobile device.” ’192 Patent at Abstract. In other words, the context in which “indicative of” is

used is that the patents-in-suit primarily pertain to simulations, not real networks with actual mobile devices.

Defendants’ arguments regarding the varying dictionary definitions of “indicative,” and the related opinions of Defendants’ expert, are also unpersuasive because “breadth is not indefiniteness.” *BASF*, 875 F.3d at 1367 (quoting *SmithKline Beecham Corp. v. Apotex Corp.*, 403 F.3d 1331, 1341 (Fed. Cir. 2005)); *see, e.g.*, Dkt. #73, Ex. 8, Apr. 21, 2022 Chatterjee Decl. at ¶¶ 112 & 135. Also, the specification need not disclose every conceivable embodiment. *See SRI Int’l v. Matsushita Elec. Corp. of Am.*, 775 F.2d 1107, 1121 (Fed. Cir. 1985) (“does not require that an applicant describe in his specification every conceivable and possible future embodiment of his invention”).

Any remaining dispute regarding application of the phrase “indicative of” perhaps raises factual issues regarding infringement but does not present any further legal question that can be resolved as part of the present claim construction proceedings. *See PPG Indus. v. Guardian Indus. Corp.*, 156 F.3d 1351, 1355 (Fed. Cir. 1998) (“after the court has defined the claim with whatever specificity and precision is warranted by the language of the claim and the evidence bearing on the proper construction, the task of determining whether the construed claim reads on the accused product is for the finder of fact”); *see also Acumed LLC v. Stryker Corp.*, 483 F.3d 800, 806 (Fed. Cir. 2007) (“[t]he resolution of some line-drawing problems . . . is properly left to the trier of fact”) (citing *PPG*, 156 F.3d at 1355); *Eon Corp. IP Holdings LLC v. Silver Spring Networks, Inc.*, 815 F.3d 1314, 1318–19 (Fed. Cir. 2016) (citing *PPG*, 156 F.3d at 1355; citing *Acumed*, 483 F.3d at 806).

Further, Defendants cite dependent Claim 4 of the ’811 Patent (reproduced above), which recites “the one or more characteristics indicative of the mobile device corresponding to the

selected mobile device model include at least one of processor type, processor speed, storage access speed, RAM size, storage size, display width, display height, pixel depth, processor availability, RAM availability or storage availability.” Whereas Defendants argue that independent Claim 1 is presumed to encompass other characteristics and the “claim language provides no guidance as to what those other characteristics may be” (Dkt. #79 at pp. 23–24) (citations omitted), these examples in dependent Claim 4 do not create confusion but rather provide additional context for a person of ordinary skill in the art to understand the usage of “indicative of” in these claims. *See Phillips*, 415 F.3d at 1314 (“Other claims of the patent in question, both asserted and unasserted, can also be valuable sources of enlightenment as to the meaning of a claim term.”).

As for the prosecution history of the ’579 Patent cited by Defendants, the examiner rejected claim language that recited “simulate one or more characteristics indicative of the selected mobile device type” as well as other language:

The features of “simulate one or more characteristics *indicative of* the selected mobile device type” and “display one or more graphical images of the application’s resource utilization as it is running” as cited in claim 37 are not well defined in the Specification for consideration. The claim is indefinite for failing to particularly point and distinctly claim the subject matter.

(Dkt. #73, Ex. 47, May 16, 2019 Office Action at 2) (WAPP-FH003399) (emphasis added).

Defendants have not established that the patent examiner rejected this claim language based specifically on the phrase “indicative of.” Defendants also submit that the patentee responded by amending the claims, including by removing the “indicative” from the claim at issue. (Dkt. #79, Ex. 52, Nov. 18, 2019 Amendment and Response at pp. 2–8) (pp. 15–21 of 24 of Ex. 52). These amendments, however, included more than merely the deletion of the word “indicative.” (*See id.*) In particular, the patentee also amended so as to change “*the* selected

mobile device type” to “*a* selected mobile device type.” (*Id.* at p. 2) (p. 16 of 24 of Ex. 52). These amendments thus do not amount to an admission or otherwise evince any purported understanding by the patentee that the phrase “indicative of” is unclear.

In the *Evicam* case cited by Defendants, this Court found that the phrase “extended periods of time” was a term of degree that was indefinite in that particular case. *Evicam Int’l, Inc. v. Enforcement Video, LLC*, No. 4:16-CV-105, 2016 WL 6470967, at *19–*20 (E.D. Tex. Nov. 2, 2016) (“The lack of objective criteria for evaluating the meaning of ‘extended’ renders the disputed term indefinite.”) (citations omitted). The term here at issue, “indicative of,” is not a term of degree. *Evicam* is therefore inapplicable.

Additional decisions of other courts cited by Defendants are also unpersuasive. *See Versata Software, Inc. v. Zoho Corp.*, 213 F. Supp. 3d 829, 836–37 (W.D. Tex. 2016) (“space-constrained display” found indefinite despite disclosure of “examples of when something constitutes a space-constrained display” because specification “fails to provide information about when something is not a space-constrained display”); *see also Prolifiq Software Inc. v. Veeva Sys. Inc.*, No. C 13-03644 SI, 2014 WL 3870016, at *6–*8 (N.D. Cal. Aug. 6, 2014) (“differently versioned” found indefinite, noting that “Prolifiq does not provide the Court with an example from the patents explaining not only when two digital content elements are different versions of each other, but also, and more importantly, when two digital content elements *are not* different versions of each other”). To whatever extent the issues are analogous, these other decisions cited by Defendants pertained to different terms in different patents and are therefore of limited persuasive weight. *e.Digital Corp. v. Futurewei Techs., Inc.*, 772 F.3d 723, 727 (Fed. Cir. 2014) (“claims of unrelated patents must be construed separately”). As discussed above, the patents-in-suit provide sufficient context such that the term “indicative of” is reasonably clear in the claims

here at issue, and *Nautilus* requires “reasonable certainty,” not “absolute precision.” 134 S. Ct. at 2129.

Based on the discussion above of the claims, the specification, the prosecution history, and the other claim construction decisions cited by Defendants, and also in light of the presumption of validity and Defendants’ burden to prove indefiniteness by clear and convincing evidence (*Sonix*, 844 F.3d at 1377), the Court hereby expressly rejects Defendants’ indefiniteness arguments and the indefiniteness opinions of Defendants’ expert. (See Dkt. #73, Ex. 8, Apr. 21, 2022 Chatterjee Decl. at ¶¶ 111–133).

Defendants present no alternative proposed construction, and no further construction is necessary. See *O2 Micro*, 521 F.3d at 1362; see also *Finjan*, 626 F.3d at 1207; *Bayer*, 989 F.3d at 977–79.

The Court therefore hereby construes “**indicative of**” to have its **plain meaning**.

4. “the selected characteristics”

<p style="text-align: center;">“the selected characteristics” ’579 Patent, Claim 1</p>	
Plaintiffs’ Proposed Construction	Defendants’ Proposed Construction
Plain and ordinary meaning.	Indefinite

(Dkt. #49, Ex. A at p. 9; *id.*, Ex. B at p. 6; Dkt. #79 at p. 28; Dkt. #91, Ex. A at p. 4).

a. The Parties’ Positions

Plaintiffs argue that although Defendants assert indefiniteness based on lack of antecedent basis, “explicit antecedence is not required,” and “[t]he use of ‘the’ as the preceding article of a term suggests shorthand recognition of implied antecedence.” (Dkt. #73 at p. 25) (citation omitted). “[O]ften,” Plaintiffs argue, “the ‘context of the claim itself’ is enough to

imply the antecedent basis.” (*Id.*) (citation omitted). Plaintiffs urge that “[i]t is readily apparent from the context of the claim itself that the phrase ‘the selected characteristics’ finds its antecedent basis in the ‘one or more characteristics of a selected mobile device type.’” (*Id.* at p. 26).

Defendants respond that “Claim 1 of the ’579 Patent recites loading ‘the selected characteristics’ without any antecedent basis,” and “[t]he plain claim language provides no basis for identifying which characteristics are the ‘selected’ characteristic.” (*Id.* at p. 28). Defendants also argue that Plaintiffs’ argument that “the selected characteristics” refers back to the “one or more characteristics of a selected mobile device type” is an attempt to re-write the claim language and should therefore be rejected. (*Id.* at pp. 29–30). Further, Defendants argue that the lack of antecedent basis is underscored by Claim 15 of the ’579 Patent, which *does* recite an operation of “select[ing] one or more characteristics associated with a mobile device.” (*Id.* at p. 29).

Plaintiffs reply that “[t]here is only one phrase in ’579 claim 1 that ‘the selected characteristics’ could possibly refer to, and that is ‘one or more characteristics of a selected mobile device type.’” (Dkt. #83 at p. 9). Plaintiffs argue:

Defendants attempt to inject confusion into what is ultimately a simple issue of reading comprehension. The user selects a mobile device type. The mobile device type has one or more characteristics. Therefore “the selected characteristics” must be those one or more characteristics of the selected mobile device type.

(*Id.*). Plaintiffs further argue that the “characteristics are selected by virtue of the user selecting the mobile device type.” (*Id.* at p. 10).

In sur-reply, Defendants argue that “Wapp’s argument confirms its blatant attempt to reverse an amendment made in the file history,” and “the simple fact is Wapp’s amendment

introduced uncertainty into the claim, rendering it indefinite.” (Dkt. #87 at p. 9). Defendants also argue that there is no implicit antecedent basis for the disputed term because “[s]electing a device is not the same as selecting one or more characteristics,” and “[t]he fact that a device has certain characteristics does not mean those characteristics were ‘selected.’” (*Id.* at p. 10).

At the June 30, 2022 hearing, Defendants argued that Plaintiffs’ proposed implicit antecedent basis could only mean that *all* characteristics of the selected mobile device are selected. Defendants argued that this would be a rewriting of the claim because the word “selected” means that some *subset* of characteristics have been selected. Plaintiffs responded that selecting a mobile device inherently involves selecting the characteristics of that device, and Plaintiffs argued that this gives appropriate meaning to the word “selected.”

b. Analysis

Claim 1 of the ’579 Patent recites (emphasis added):

1. A non-transitory, computer-readable medium comprising software instructions for developing an application to be run on a mobile device, wherein the software instructions, when executed, cause a computer to:

display a list of one or more mobile device types from which a user can select;

simulate one or more characteristics of a selected mobile device type;

initiate loading of at least one of *the selected characteristics* from at least one of a remote server and a computer-readable media;

monitor utilization of one or more resources of the selected mobile device type over time as an application is running;

display a representation of one or more of the monitored resources.

Plaintiffs point to the limitation of “simulate one or more characteristics of a selected mobile device type” as providing implicit antecedent basis for the recital of “the selected characteristics” in the “initiate loading . . .” limitation. Plaintiffs cite several district court decisions regarding implicit antecedent basis. *See Mobile Commerce Framework, Inc. v. Foursquare Labs, Inc.*, No. 11-CV-0481, 2013 WL 485860, at *4 (S.D. Cal. Feb. 6, 2013)

(finding that the definite article “the” suggested that “the request” was “shorthand having an implied antecedent basis in a prior claim term”); *see also Horus Vision, LLC v. Applied Ballistics, LLC*, No. 13-CV-05460, 2014 WL 6989233, at *11 (N.D. Cal. Dec. 9, 2014) (“The context of the claim itself is enough to imply the antecedent basis for this claim term”); *Schindler Elevator Corp. v. Otis Elevator Co.*, No. 09-CV-0560, 2010 WL 199600, at *9 (D.N.J. Jan. 13, 2010) (“The use of the word ‘said’ indicates that Claim 4 is referring to the particular strand pattern of Claim 2. The phrase ‘said strand pattern’ refers to the ‘plurality of wires . . . in a twisted pattern’ disclosed in Claim 2. Although the exact phrase ‘strand pattern’ is not used in Claim 2, it does not follow that the term ‘said strand pattern’ of Claim 4 cannot refer to the group of strands contained in Claim 2.”) (citing *Energizer Holdings Inc. v. Int’l Trade Comm’n*, 435 F.3d 1366, 1371 (Fed. Cir. 2006)).

As a general matter, as Plaintiffs point out, antecedent basis in some cases can be implicit. *See Energizer*, 435 F.3d at 1371 (holding that “an anode gel comprised of zinc as the active anode component” provided implicit antecedent basis for “said zinc anode”); *see also Ex Parte Porter*, 25 U.S.P.Q. 2d (BNA) 1144, 1145 (B.P.A.I. 1992) (“The term ‘the controlled fluid’ . . . finds reasonable antecedent basis in the previously recited ‘controlled stream of fluid’”); *Fisher-Price, Inc. v. Graco Children’s Prods.*, 154 F. App’x 903, 909 (Fed. Cir. 2005) (“[a] claim is not invalid for indefiniteness if its antecedent basis is present by implication”) (citations omitted).

This is not such a case. Here, because the “simulate . . .” limitation refers to the “mobile device type” (rather than the “characteristics”) as being “selected,” the recital of “one or more characteristics of a selected mobile device type” does *not* provide implicit antecedent basis for the recital of “the selected characteristics.” *See id.*

The claim is thus not reasonably clear as to the meaning of “the selected characteristics” and is therefore indefinite. *See Halliburton Energy Servs., Inc. v. M-I LLC*, 514 F.3d 1244, 1249 (Fed. Cir. 2008) (“a claim could be indefinite if a term does not have proper antecedent basis where such basis is not otherwise present by implication or the meaning is not reasonably ascertainable”).

Plaintiffs argue:

The claim lets a user select a mobile device type and the selected mobile device type has associated characteristics. Therefore, the characteristics of the selected mobile device type are the selected characteristics. This is how a POSITA would understand the term—there is no ambiguity. [Dkt. #73,] Ex. 7[, Apr. 21, 2022 Malek Decl.] at ¶ 84. The specification’s description of Figure 6 is also consistent with this understanding. ’579 Pat. at 9:20–22 (“a user of window 500 selects a mobile device using pull-down list 502 and emulator 101 loads mobile device characteristics 115 into memory 132.”).

(Dkt. #73 at p. 26). Plaintiffs’ reliance on a particular disclosed embodiment is unavailing because claim scope is ordinarily not limited to the disclosed embodiments. *See Phillips*, 415 F.3d at 1323. Also, Plaintiffs propose inferring that “the characteristics of the selected mobile device type are the selected characteristics” (Dkt. #73 at p. 26), but this proposed inference lacks any persuasive support. Moreover, this suggested inference is unclear as to *which* characteristics are selected (or, if this inference is intended to refer to *all* characteristics, this inference is unclear as what “all” characteristics would mean in this context).

Finally, the parties have discussed prosecution history in which the patentee amended the claim as follows:

simulate one or more characteristics ~~indicative of a~~ [[the]] selected mobile device type;
 initiate ~~downloading of at least one of the selected one or more characteristics indicative~~
~~of the selected mobile device type from~~ at least one of a remote server and a computer-readable
media;

(Dkt. #73, Ex. 8, Apr. 21, 2022 Chatterjee Decl. at ¶ 102) (reproducing Ex. 48 at 1).

Although Defendants’ reliance on this prosecution history is not persuasive, Plaintiffs’ argument that “[t]here is no indication that the applicant intended to break the antecedent basis relationship between the two terms” (Dkt. #73 at p 27) is also unpersuasive because Plaintiffs cite no authority for the proposition that antecedent basis can be inferred from claim language that was modified during prosecution rather than needing to be apparent based on the language of the issued claim. Indeed, at the June 30, 2022 hearing, Plaintiffs submitted that their arguments regarding this prosecution history are primarily only counter-arguments to Defendants’ reliance on this prosecution history.

The Court therefore hereby finds that **“the selected characteristics” in Claim 1 of the ’579 Patent is indefinite.**

CONCLUSION

The Court adopts the constructions set forth in this opinion for the disputed terms of the patents-in-suit. The parties are ordered that they may not refer, directly or indirectly, to each other’s claim construction positions in the presence of the jury. Likewise, the parties are ordered to refrain from mentioning any portion of this opinion, other than the actual definitions adopted by the Court, in the presence of the jury. Any reference to claim construction proceedings is limited to informing the jury of the definitions adopted by the Court.

IT IS SO ORDERED.

SIGNED this 6th day of July, 2022.


AMOS L. MAZZANT
UNITED STATES DISTRICT JUDGE